JRYM 409B: MOTOR CONTROLS (ILT)

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Fall 2026
Units:	0
Hours:	6 lecture per quarter (6 total per quarter)
Prerequisite:	This course is limited to students employed with Cupertino Electric.
Degree & Credit Status:	Non-Degree-Applicable Non-Credit Course
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Non-Credit Course (Receives no Grade)
Repeatability:	Unlimited Repeatability

Student Learning Outcomes

- Identify and differentiate between the various drawing disciplines used for motors and their control systems
- Apply the National Electrical Code (NEC) Article 430 to accurately size motors, select appropriate overcurrent protection, and determine correct conduit and feeder sizes

Description

This course will dive into Section 430 of the National Electrical Code and the requirements for motors on a project. Students will discuss the lessons learned and the most common mistakes and how to avoid them.

Course Objectives

The student will be able to:

1. Understand Article 430 of the National Electrical Code and basics of motor control.
2. Understand the drawings and verify circuit size and installation.
3. Size a motor overcurrent protection of a circuit, conduit, and feeder size.
4. Apply NEC requirements, specifically Article 430, for proper motor sizing and protection.
5. Analyze single-line, floor, and roof drawings to locate motor loads and control functions.

Course Content

1. NEC and Article 430 overview
2. Different drawing disciplines for motors and controls
3. Analyzing motor-related drawings
4. Motor sizing and protection

Lab Content

Not applicable.

Special Facilities and/or Equipment

1. When taught in-person, clean classroom with monitor and printed material for students to take as reference materials.
2. When taught online, this course requires access to CEI's Learning Management System (Amplify), ongoing access to a computer with the necessary software and hardware to view video content, and a reliable intranet connection.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Results of class participation

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lectures

Representative Text(s) and Other Materials

Course materials provided by Cupertino Electric.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

No assignments.

Discipline(s)

Electricity